DRAFT
Maintenance Concept Remains Consistent with the Prior Fiscal Year

UNITED STATES MARINE CORPS

STATEMENT OF WORK (SOW) FOR THE INSPECT, REPAIR ONLY AS NECESSARY (IROAN) of the M60A1 TANK CHASSIS,TRANSPORTING BRIDGE, ARMORED VEHICLE LAUNCHED, (AVLB)

SCISSORING TYPE

NSN 5420-00-889-2020

SOW-07-PMM142-08940A-2/1

21 July 2003

TABLE OF CONTENTS

STATEMENT OF WORK (SOW)
INSPECT REPAIR ONLY AS NECESSARY (IROAN)
of the
M60A1 Tank Chassis, Transporting
Bridge, Armored Vehicle Launched, (AVLB)
Scissoring Type
NSN 5420-00-889-2020

1.0 SCOPE. This Statement of Work (SOW), along with Depot Maintenance Work Requirements (DMWR), listed Military Standards, Government Documents and Publications, incorporated into this SOW, establishes, sets forth tasks and identifies the work efforts that shall be performed by the Contractor (for the purpose of this SOW, Contractor is defined as the commercial or government entity performing the IROAN in the effort of the M60A1 Tank Chassis, Transporting Bridge, Armored Vehicle Launched, (AVLB) Scissoring Type (hereafter referred to as the M60A1 Tank Chassis, Transporting Bridge, Armored Vehicle Launched (AVLB)). This document contains requirements to restore the M60A1 Tank Chassis, Transporting Bridge, Armored Vehicle Launched, (AVLB) to Condition Code "B". Condition Code "B" is defined as "serviceable/issuable with qualification, new, used, repaired or reconditioned materiel which is serviceable and issuable for its intended purpose but which is restricted from issue to specific units, activities, or geographical areas by reason of its limited usefulness or short service life expectancy. Includes materiel with three to six months shelf-life remaining."

1.1 Background. IROAN is defined as "That maintenance technique which determines the minimum repairs necessary to restore equipment components or assemblies to prescribed maintenance serviceability standards by utilizing all available diagnostic equipment and test procedures in order to minimize disassembly and parts replacement."

2.0 APPLICABLE DOCUMENTS. The following documents form a part of this SOW to the extent specified. Unless otherwise specified, the issues of these documents are those listed in the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto which is in effect on the date of solicitation. In the event of conflict between the documents referenced herein and the contents of this SOW, the contents of this SOW shall be the superseding requirements.

2.1 Military Standards

MIL-STD-129	Military Marking for Shipment and Storage

2.2 Other Government Documents and Publications

DoD 4000.25-1-M	Military Standard Requisitioning and Issue Procedures (MILSTRIP)

MCO 4855.10B	Marine Corps Product Quality Deficiency Requirement (PQDR) Program
NAVMC 10394	Track Vehicle Monthly Log
ATPD 2222	Chassis, Tank, Armored Vehicle, Bridge Launcher, M60A1 and M48A5; Processing for Storage and Shipment of
DMWR 3-4240-287	Depot Maintenance Work Requirement for Filter Unit, Gas-Particulate
DMWR 5-5420-229	Depot Maintenance Work Requirement for Launcher and M60A1 Tank Chassis, Transporting: Fpor Bridge, Armored Vehicle, Launched
DMWR 9-2520-223	Depot Maintenance Manual, Transmission Model CD 850
DMWR 9-2520-531	Depot Maintence Requirement for M60 Series Final Drive Assemblies
LO 5-5420-202-12	Lubrication Order, M60A1 AVLB
MI-08940A-35/1	Installation of Sincgars in the AVLB M60A1
TB 43-0002-87	Brake Fluid, Silicone (BFS) Conversion Procedures for Tank Automotive Equipment
TB 9-2300-378-14	Air Induction System Maintenance M48 and M60 Series Vehicles
TI-07585-15/13	Slave Starting Procedures for M60 Series Tanks
TI-07585-25/1	Hydraulic Fluid Replacement for M60 Series Tanks
TI-07585-25/2	Bus Bar Alignment for M60 Series Tanks
TI-07589-25/3	Installation Upper Roadwheel Arm Grease Seal
TI-2815-50/5	Application of Weight Code Identification Stamp on Pistons Diesel Turbosupercharged Engine AVDS-1790-2C and AVDS-1790-2DR
TI-5820-25/22	Electromagnetic Environmental Effects (E3) Procedures for Installation of Communication Equipment on U.S.

	Marine Corps Platforms
TI-85712-25/1	Generator and Starter Cradle Change M60 Series Tanks And The M88A1 Recovery Vehicle
TI-85712-25/2	Removal and Installion for Transmission Oil Cooler Lines
TM-4750-15/1	Painting Registration Markings
TM-4750-15/2	Camonflage Pattern
TM-4795-12	Corrosion Prevention and Control for Marine Coprs Equipment

Military Handbooks (For Guidance)

MIL-HDBK-61	Configuration Management Guidance

2.3 Industry Standards

ANSI/ISO/ASQC Q9001-2000	Quality Management Systems-Requirements
JESD625-A	Requirements for Handling Electrostatic-Discharge Sensitive ESDS Devices

Industry Standards (For Guidance)

ANSI/EIA-649	National Consensus Standard for Configuration Management

Copies of Military Standards and Specifications are available from the DOD Single Stock Point, Document Automation and Production Service, Building 4/D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, commercial telephone number (215) 697-2179 or DSN 442-2179, or http://www.dodssp.daps.mil. Copies of other government documents and publications required by Contractors in connection with specific SOW requirements shall be obtained through the Contracting Officer: Contracts Department (Code 891), P.O. Drawer 43019, 814 Radford Blvd., Marine Corps Logistics Command, Albany, Georgia 31704-3019, commercial telephone number (229) 639-6761 or DSN 567-6761. Copies of engineering drawings, if applicable, shall be obtained from the Supply Chain Management Center, Attn: Code 583-1, 814 Radford Blvd., Suite 20320, Albany, Georgia 31704-0320, commercial telephone number (229) 639-6476 or DSN 567-6476. Depot Maintenance Work Requirements (DMWRs) required for this SOW are available from Commander, US Army Tank-Automotive Command, AMSPA-DSA-HT BLDG.231, 4th Floor, Warren, MI. 48397-5000.

3.0 REQUIREMENTS

3.1 General Task. In fulfilling the specified requirements, the Contractor shall:

a. Provide material, labor, facilities, missing parts and repair parts necessary to inspect, diagnose, restore, and test the M60A1 Tank Chassis, Transporting Bridge, Armored Vehicle Launched (AVLB). Upon completion of the IROAN, vehicles shall be condition Code "B."

b. M60A1 AVLB Weekly Status Report must be prepared and submitted by the Contractor.

c. Conduct in-process and final on-site testing for witness by Marine Corps Systems Command (MCSC) (Code AFSS, PMM-142), Tanks Section, Albany, GA or designated representative.

Note: The M60A1 Tank Chassis, Transporting Bridge, Armored Vehicle Launched (AVLB) shall be painted in accordance with TM 4750-15/1 unless otherwise specified. Surface preparation for painting of the hull and components shall be in accordance with TM 4750-15/1. The prepared hull and components shall then be primed, and painted with CARC paint. Glass, tires, hoses, belts, and other rubber parts shall not be painted.

3.2 Detailed Tasks. The following tasks describe the different phases for IROAN of the M60A1 Tank Chassis, Transporting Bridge, Armored Vehicle Launched (AVLB).

3.2.1 Phase I - Pre-Induction. The Contractor shall perform a pre-induction inspection using the Pre-Induction Analysis Checklist located in Table 3-1 of DMWR 5-5420-229, pages 3-20 through 3-46, with the exception of Item 13b on page 3-25. Item 13a on page 3-24 will be performed but 13b on page 3-25 shall not be performed, for each M60A1 Tank Chassis, Transporting Bridge, Armored Vehicle Launched (AVLB) using the Contractor facility's diagnosis, inspection and testing techniques to determine extent of work and parts required. These findings shall be annotated and provided to Marine Corps Systems Command (MCSC) (Code AFSS, PMM-142), Tanks Section, Albany, GA or designated representative, in accordance with Section 4.0 of this SOW.

3.2.2 Phase II-IROAN. After pre-induction test and inspections have been completed, repair of the M60A1 Tank Chassis, Transporting Bridge, Armored Vehicle Launched, (AVLB) shall be accomplished in accordance with the below listed documents/publications. Deficiencies noted on the Pre-Induction Checklist during Phase I shall be repaired/replaced. Components shall not be disassembled for replacement of mandatory parts unless that part has failed, or the component assembly wherein the part is located is disassembled for repair.

DMWR 3-4240-287	Depot Maintenance Work Requirement for Filter Unit, Gas-Particulate

DMWR 5-5420-229	Depot Maintenance Work Requirement for Launcher and M60A1 Tank Chassis, Transporting: For Bridge, Armored Vehicle, Launched
DMWR 9-2520-223	Depot Maintenance Work Requirement for Transmission CD850
DMWR 9-2520-531	Depot Maintenance Work Requirement for M60 Series Final Drive Assemblies
LO 5-5420-202-12	Lubrication Order, for M60A1 AVLB
NAVMC 10394	Track Vehicle Monthly Log
MI-08940A-35/1	Installation of Sincgars in the AVLB M60A1
TB 43-0002-87	Break Fluid, Silicone (BFS) Conversion Procedures for Tank Automotive Equipment
TB 9-2300-378-14	Air Induction System Maintenance M48 and M60 Series Tanks
TI-07585-15/13	Slave Starting Procedures for M60 Series Tanks
TI-07585-25/1	Hydraulic Fluid Replacement for M60 Series Tanks
TI-07585-25/2	Bus Bar Alignment for M60 Series Tanks
TI-07589-25/3	Installation Upper Roadwheel Arm Grease Seal
TI-2815-50/5	Application of Weight Code Identification Stamp on Pistons Diesel Turbsupercharged Engine AVDS-1790-2C and AVDS-1790-2DR
TI-5820-25/22	Electromagnetic Environmental Effects (E3) Procedures for Installation of Communication Equipment on U.S. Marine Corps Platforms
TI-85712-25/1	Generator and Starter Cradle Change M60 Series Tanks and the M88A1 Recovery Vehicle
TI-85712-25/2	Removal and Installion for Transmission Oil Cooler Lines
TM-4795-12	Corrosion Prevention and Control for Marine Corps Equipment

TM-4750-15/2 Camoflage Pattern

a. Hardware

(1) Replace broken, unserviceable and/or missing hardware including nuts, bolts, screws, washers, turnlock fasteners, mandatory replacement items, safety, and one-time use items, etc., in accordance with this SOW. Unserviceable would include any of the above that failed to function properly.

(2) Ensure proper hardware locking devices are present on all moving mechanical assemblies.

(3) Hardware normally supplied with commercial parts shall be used unless specifically prohibited.

3.2.3 Phase III - Inspection, Testing and Acceptance

a. Inspection, Testing and Acceptance of the M60A1 Tank Chassis, Transporting Bridge, Armored Vehicle Launched (AVLB) shall be conducted in accordance with DMWR 5-5420-229. The completed results shall be provided to Marine Corps Systems Command (MCSC) (Code AFSS, PMM-142), Tanks Section, Albany, GA or designated representative, in accordance with Section 4.0 of this SOW.

b. The Contractor shall be responsible for conducting required tests. Acceptance tests shall be held by the Contractor. Marine Corps Systems Command (MCSC) (Code AFSS, PMM-142), Tanks Section, Albany, GA or designated representative shall be given a minimum of two weeks notice prior to the beginning of acceptance testing. The test area shall be clear of all equipment parts, components, etc., not required for the test.

c. The Contractor shall be responsible for correcting any deficiencies identified during inspection/testing. Marine Corps Systems Command (MCSC) (Code AFSS, PMM-142), Tanks Section, Albany, GA or designated representative, may require the Contractor to repeat test or portions thereof, if the original test fails to demonstrate compliance with this SOW. Vehicles designated for shipment, Contractors/Depots have the responsibility to coordinate with the gaining commands the time/place for the Final Inspection and Test. Should the gaining command opt not to inspect on site (the Contractors/Depot facility), the vehicles will be shipped to the gaining commands and will be subject to an Acceptance Limited Technical Inspection by the units acceptance team at the gaining unit site. PQDR's will be generated by the gaining unit for all discrepancies found in accordance with MCO 4855.10B (PQDR Program).

3.2.4 Phase IV – Packaging, Handling, Storage and Transportation (PHS&T)

a. The Contractor shall be responsible for the preservation and packaging of the item(s) being IROAN'D under the terms of this Statement of Work. Items being prepared for

shipment shall be in accordance with ATPD 2222 which may be obtained from the Storage and Distribution Department (Code 580), Attn: Business Management Branch (Code 581), Suite 20320, 814 Radford Blvd., Albany, GA 31704-0320, commercial telephone number (229) 639-6786 or DSN 567-6786. Vehicles scheduled for long-term storage shall be preserved to Level "A". Vehicles scheduled for immediate use to all locations with the exception of Maritime Pre-positioned Forces (MPF), shall be preserved to Level "B", Drive-on, Drive-off. Items being preserved to Level "B", Drive-on, Drive-off scheduled for overseas shipment shall have a label affixed which reads, "NOT FOR WEATHER DECK STOWAGE." Items scheduled for MPF shall be preserved to Level "B", MPF Modified Drive away.

b. The terms "Drive-On/Drive-Off" and "MPF Modified Drive-Away" are defined as follows:

(1) Drive-On/Drive-Off - Batteries shall be hot and disconnected from the vehicle electrical system. Terminals and leads shall be taped. Fuel tank shall be filled ¼ tank full of JP5/8. The air intake, exhaust and brake systems, drive-train and gauges shall be depreserved.

(2) MPF Modified Drive-Away - Batteries shall be hot and connected to the vehicle electrical system. Fuel tank shall be filled ¾ full of JP5. The air intake, exhaust and brake systems, drive-train and gauges shall be depreserved. Fire extinguisher brackets and seats shall be installed.

c. Marking for shipment and storage shall be in accordance with MIL-STD-129.

d. The Marine Corps will provide the Contractor with the shipping address(es) for delivery of the repaired equipment. The Contractor shall be responsible for arranging for shipment to the pre-desiginated site(s). The Marine Corps will be responsible for transportation cost associated with shipping the subject equipment to and from the Contractor.

3.3 Configuration Management

3.3.1 Configuration Status Accounting (CSA)

a. The Contractor shall record and submit data on retrofit accomplished during Phase II. All approved Modification Instructions (MIs) shall be verified or applied during Phase II of the IROAN.

b. The Contractor shall determine the application status of approved configuration changes by visual inspection. MCSC (Code AFSS, PMM-142), Tanks Section, Albany, GA will identify the configuration changes to be inspected by using a Configuration Inspection Checklist developed by the Contractor.

c. The Contractor shall record serial numbers of the assemblies listed on the Configuration Inspection Checklist. The Contractor shall record the information on the same form that was used to record the application status of configuration changes.

3.3.2 Configuration Control. The Contractor shall apply configuration control procedures to established configuration items. The Contractor shall not implement configuration changes to an items documented performance or design characteristics without receiving prior written authorization. The baseline configuration has been defined by written procedures or materiel contained in manuals, standards, instructions or engineering drawings. If it is necessary to depart from the authorized configuration baseline, the Contractor shall submit a Request for Deviation using MIL-HDBK-61 and ANSI/EIA-649 as guidance for preparing these configuration documents.

3.4 Government Furnished Equipment (GFE)/Government Furnished Material (GFM). The Management Control Activity (MCA) (Code 571-1) will coordinate Government Furnished Equipment/Government Furnished Material (GFE/GFM) requests and maintain a central control system on all government owned assets in the Contractor's possession. The MCA will forward a GFE Accountability Agreement to the Contractor for signature on an annual basis to establish a chain of custody and identify property responsibilities for Marine Corps assets. The Contractor is to acknowledge receipt of GFM to the MCA within 15 days of receipt. This can be done by mailing a copy of the DD1348 to Material Management Department, Management Control Activity (Code 571-1), 814 Radford Blvd., STE 20320, Albany, GA 31704-0320 or faxing a copy to commercial telephone number (229) 639-5498 or DSN 567-5498.

3.5 Contractor Furnished Materiel (CFM). The Contractor may requisition materiel as required in the performance of the SOW through the DoD Supply System. DoD 4000.25-1-M (MILSTRIP), Chapter 11 provides guidance to Contractors on the requisitioning process. The Contractor's decision to utilize CFM procured from the DoD Supply System shall be based upon cost effectiveness, availability of materiel and the required completion/delivery date.

3.6 Electromagnetic Environmental Effects (E3) Procedures. The Contractor shall plan for the proper E3 control procedures in the IROAN process and use TI-5820-25/22 in conjunction with the detailed requirements specified in this document.

3.7 Electrostatic Discharge (ESD) Control Program. The Contractor shall establish, implement, and document an ESD control program following the guidelines provided in JESD625-A. ESD protective measures shall be used during manufacturing, handling, inspection, testing, marking, packaging, storing, and transporting ESD sensitive components.

3.8 Quality Assurance Provisions. The Contractor shall provide and maintain a Quality System, that as a minimum, adheres to the requirements of ANSI/ISO/ASQC Q9001-2000, Quality Management Systems-Requirements. The Contractors' work shall be subject to reviews and inspections for compliance with the procedures and standards by MCSC (Code AFSS, PMM-142), Tanks Section, Albany GA during working hours. Inspection by MCSC (Code AFSS, PMM-142), Tanks Section, Albany GA of test plans and materials furnished

hereunder does not relieve the Contractor from any responsibility regarding defects or other failures to meet contract requirements. Notwithstanding such MCSC (Code AFSS, PMM-142), Tanks Section, Albany GA inspection, it shall be the Contractors' responsibility to ensure that the entire system meets the performance requirements delineated and addressed in this SOW and applicable references. The Contractor shall establish and maintain an Inspection System Requirement in compliance with ANSI/ISO/ASQC Q9001-2000 and in accordance with this SOW. The Contractor shall provide an Inspection and Test Plan to MCSC (Code AFSS, PMM-142), Tanks Section, Albany, GA.

3.9 Rejection. Failure of the Contractor to promptly correct deficiencies discovered shall be reason for suspension of acceptance until corrective action has been accomplished. The Contractor shall have in place documented procedures and standards for quality assurance and the Contractor's work shall be subject to reviews and inspections for compliance with the procedures and standards by MCSC (Code AFSS, PMM-142), Tanks Section, Albany, GA. Noncompliance with procedures resulting in degraded quality of work may result in a stop-work order requiring action by the Contractor to correct the work performed and to enforce compliance with quality assurance procedures. Failure to comply with requirements listed herein shall be reason for rejection by MCSC (Code AFSS, PMM-142), Tanks Section, Albany, GA. The Contractor shall, at no additional cost to MCSC (Code AFSS, PMM-142), Tanks Section, Albany, GA, provide the following:

a. Develop an approach for modification or correction of all deficiencies.

b. Upon approval of a documented approach, the Contractor shall correct the deficiencies until an acceptable compliance with acceptance test procedures is demonstrated.

4.0 REPORTS. The following reports shall be delivered and submitted to Marine Corps Systems Command (Code AFSS, PMM-142), 814 Radford Blvd., STE 20343, Albany, Georgia 31704-0343.

4.1 Repairable Item Inspection Report. The Contractor shall provide a Repairable Item Inspection Report, to MCSC (Code AFSS, PMM-142), Tanks Section, Albany GA, for each M60A1 Tank Chassis, Transporting for Bridge, Armored Vehicle Launched, (AVLB). The report shall be identified by U.S. Marine Corps Serial Number.

4.2 Weekly Progress Report. The Contractor shall provide Weekly Progress Reports, MCSC (Code AFSS, PMM-142), Tanks Section, Albany, GA, summarizing the progress and status of the IROAN Program.

4.3 Monthly Cost Status Report. The Contractor shall provide a Monthly Cost Status Report in Contractor format. The report should be inclusive of the first to the last business day of each month. This document should summarize cost data by individual USMC vehicle serial number and be provided to MCSC (Code AFSS, PMM-142), Tanks Section, Albany, GA.

4.4 Pre-shop Analysis/Final Inspection Record/Acceptance Tests/Final Assembly and Testing/Final Performance Check. The Contractor/repair facility shall prepare a Pre-shop Analysis Checklist, Final Inspection Record, Acceptance Test, Final Assembly and Testing, and Final Performance Check for each M60A1 Tank Chassis, Transporting for Bridge, Armored Vehicle Launched, (AVLB) repaired. These documents shall be available during final acceptance testing. One copy of each document shall be provided to MCSC (AFSS, PMM-142), Tanks Section, Albany, GA after final acceptance of the M60A1Tank Chassis, Transporting Bridge. Armored Vehicle Launched (AVLB).

4.5 Dynamometer Run-In Schedules. The Contractor shall provide a copy of their Dynamometer Run-In Schedules. These documents shall show dynamometer test results required on the M60A1 Tank Chassis, Transporting Bridge, Armored Vehicle Launched, (AVLB) during the Pre-Induction Phase. These documents shall be available during final acceptance testing. One copy shall be provided to MCSC (Code AFSS, PMM-142), Tanks Section, Albany, GA, after acceptance of the M60A1 Tank Chassis, Transporting Bridge, Armored Vehicle Launched (AVLB).